
Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866)

217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2008; month=2; day=12; hr=13; min=35; sec=34; ms=766;]

Validated By CRFValidator v 1.0.3

Application No: 10590441 Version No: 1.0

Input Set:

Output Set:

Started: 2008-02-12 11:18:30.460

Finished: 2008-02-12 11:18:32.208

Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 748 ms

Total Warnings: 26

Total Errors: 0

No. of SeqIDs Defined: 30

Actual SeqID Count: 30

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Input Set:

Output Set:

Started: 2008-02-12 11:18:30.460

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Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 748 ms

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Total Errors: 0

No. of SeqIDs Defined: 30

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Error code Error Description

This error has occured more than 20 times, will not be displayed

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1				J					10					15	
Glu	Glu	Glu	Gln	Glu	Glu	Asn	T. <u>011</u>	Glu	Δla	Sar	Glv	Asn	Tur	T.vs	Tur
Giu	Gru	GIU		Giu	Giu	ASII	пец		лта	DET	GIY	TSD		пур	тут
			20					25					30		
							_ •		_						
Ser	Gly	Arg	Asp	Ser	Leu	Ile	Phe	Leu	Val	Asp	Ala	Ser	Lys	Ala	Met
		35					40					45			
Phe	Glu	Ser	Gln	Ser	Glu	Asp	Glu	Leu	Thr	Pro	Phe	Asp	Met	Ser	Ile
	50					55					60				
						33					00				
Gln	Cys	Ile	Gln	Ser	Val	Tyr	Ile	Ser	Lys	Ile	Ile	Ser	Ser	Asp	Arq
	_								2					•	_
65					70					75					80
Asp :	Leu	Leu	Ala	Val	Val	Phe	Tvr	Glv	Thr	Glu	Lvs	Asp	Lvs	Asn	Ser
1121							- 1 -			0 = 0.		11010	_1 ~		
				85					90					95	
Val .	7 an	Pho	Tvc	7 gp	T10	Талъ	77 a l	T 011	Gln	Glu	T 011	7 gn	7 an	Dro	G1v
vai .	ASII	riie		ASII	TIE	тут	vai		GIII	Giu	пеп	ASP		FIO	Gry
			100					105					110		
7. T	_	73	~ 7	-	~ ⁷	-	73.	<i>~</i> ¬	T- 1	-	~ ⁷	<i>~</i> ¬	~ ¬	<i>C</i> 1	<i>~</i> ¬
Ala	туѕ	Arg	тте	ьeu	GLu	ьeu	Asp	GIn	ьие	тлг	GLY	GIn	GIn	GТХ	GIn
		115					120					125			
T - ·	7 3. –	T-1	C 7	73.	ኮ σ '	ኮ σ '	C 7	TT -1	<i>α</i> ¹	C	73.		C	T .	C
Lys .	arg	ьие	GTN	Asb	MEL	мес	дΤЛ	пlS	σтλ	ser	Asb	туr	ser	ьeu	ser

Glu Val	L Leu	Trp	Val	Cys 150	Ala	Asn	Leu	Phe	Ser 155	Asp	Val	Gln	Phe	Lys 160
Met Sei	f His	Lys	Arg 165	Ile	Met	Leu	Phe	Thr 170	Asn	Glu	Asp	Asn	Pro 175	His
Gly Asr	n Asp	Ser 180	Ala	Lys	Ala	Ser	Arg 185	Ala	Arg	Thr	Lys	Ala 190	Gly	Asp
Leu Aro	g Asp 195	Thr	Gly	Ile	Phe	Leu 200	Asp	Leu	Met	His	Leu 205	Lys	Lys	Pro
Gly Gly 210		Asp	Ile	Ser	Leu 215	Phe	Tyr	Arg	Asp	Ile 220	Ile	Ser	Ile	Ala
Glu Ası 225	o Glu	Asp	Leu	Arg 230	Val	His	Phe	Glu	Glu 235	Ser	Ser	Lys	Leu	Glu 240
Asp Lei	ı Leu	Arg	Lys 245	Val	Arg	Ala	Lys	Glu 250	Thr	Arg	Lys	Arg	Ala 255	Leu
Ser Aro	g Leu	Lys 260	Leu	Lys	Leu	Asn	Lys 265	Asp	Ile	Val	Ile	Ser 270	Val	Gly
Ile Ty	275	Leu	Val	Gln	Lys	Ala 280	Leu	Lys	Pro	Pro	Pro 285	Ile	Lys	Leu
Tyr Aro		Thr	Asn	Glu	Pro 295	Val	Lys	Thr	Lys	Thr 300	Arg	Thr	Phe	Asn
Thr Ser	Thr	Gly	Gly	Leu 310	Leu	Leu	Pro	Ser	Asp 315	Thr	Lys	Arg	Ser	Gln 320
Ile Ty	c Gly	Ser	Arg 325	Gln	Ile	Ile	Leu	Glu 330	Lys	Glu	Glu	Thr	Glu 335	Glu
Leu Ly:	s Arg	Phe 340	Asp	Asp	Pro	Gly	Leu 345	Met	Leu	Met	Gly	Phe 350	Lys	Pro
Leu Val	1 Leu 355	Leu	Lys	Lys	His	His 360	Tyr	Leu	Arg	Pro	Ser 365	Leu	Phe	Val

Tyr	Pro 370	Glu	Glu	Ser	Leu	Val 375	Ile	Gly	Ser	Ser	Thr 380	Leu	Phe	Ser	Ala
Leu 385	Leu	Ile	Lys	Cys	Leu 390	Glu	Lys	Glu	Val	Ala 395	Ala	Leu	Cys	Arg	Tyr 400
Thr	Pro	Arg	Arg	Asn 405	Ile	Pro	Pro	Tyr	Phe 410	Val	Ala	Leu	Val	Pro 415	Gln
Glu	Glu	Glu	Leu 420	Asp	Asp	Gln	Lys	Ile 425	Gln	Val	Thr	Pro	Pro 430	Gly	Phe
Gln	Leu		Phe					_	_	_	_	_		Pro	Phe
Thr	Glu 450	Lys	Ile	Met	Ala	Thr 455	Pro	Glu	Gln	Val	Gly 460	Lys	Met	Lys	Ala
Ile 465	Val	Glu	Lys	Leu	Arg 470	Phe	Thr	Tyr	Arg	Ser 475	Asp	Ser	Phe	Glu	Asn 480
Pro	Val	Leu	Gln	Gln 485	His	Phe	Arg	Asn	Leu 490	Glu	Ala	Leu	Ala	Leu 495	Asp
Leu	Met	Glu	Pro 500	Glu	Gln	Ala	Val	Asp 505	Leu	Thr	Leu	Pro	Lys 510	Val	Glu
		515					520					525		Glu	
	530					535					540			Arg	_
His 545	Asp	Asn	Glu	Gly	Ser 550	Gly	Ser	Lys	Arg	Pro 555	Lys	Val	Glu	Tyr	Ser 560
Glu	Glu	Glu	Leu	Lys 565	Thr	His	Ile	Ser	Lys 570	Gly	Thr	Leu	Gly	Lys 575	Phe
Thr	Val	Pro	Met 580	Leu	Lys	Glu	Ala	Cys 585	Arg	Ala	Tyr	Gly	Leu 590	Lys	Ser

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595 600 605

Asp

<210> 2

<211> 732

<212> PRT

<213> Homo sapiens

<400> 2

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Gly Phe Thr Met Ser Asn Ser Ile Pro Gly Ile Glu Ser Pro Phe Glu 20 25 30

Gln Ala Lys Lys Val Ile Thr Met Phe Val Gln Arg Gln Val Phe Ala 35 40 45

Glu Asn Lys Asp Glu Ile Ala Leu Val Leu Phe Gly Thr Asp Gly Thr 50 55 60

Asp Asn Pro Leu Ser Gly Gly Asp Gln Tyr Gln Asn Ile Thr Val His
65 70 75 80

Arg His Leu Met Leu Pro Asp Phe Asp Leu Leu Glu Asp Ile Glu Ser 90 95

Lys Ile Gln Pro Gly Ser Gln Gln Ala Asp Phe Leu Asp Ala Leu Ile 100 105 110

Val Ser Met Asp Val Ile Gln His Glu Thr Ile Gly Lys Lys Phe Glu
115 120 125

Lys Arg His Ile Glu Ile Phe Thr Asp Leu Ser Ser Arg Phe Ser Lys
130 135

Ser Gln Leu Asp Ile Ile Ile His Ser Leu Lys Lys Cys Asp Ile Ser 145 150 155 160

Leu Gln Phe Phe Leu Pro Phe Ser Leu Gly Lys Glu Asp Gly Ser Gly 165 170 175

Asp Arg Gly	Asp Gly Pro	_	eu Gly Gly 85	His Gly Pro 190	Ser Phe
Pro Leu Lys 195	Gly Ile Thr	Glu Gln G 200	ln Lys Glu	Gly Leu Glu 205	Ile Val
Lys Met Val 210	Met Ile Ser	Leu Glu G 215		Gly Leu Asp 220	Glu Ile
Tyr Ser Phe 225	Ser Glu Ser 230		ys Leu Cys 235	Val Phe Lys	Lys Ile 240
Glu Arg His	Ser Ile His 245	Trp Pro C	ys Arg Leu 250	Thr Ile Gly	Ser Asn 255
Leu Ser Ile	Arg Ile Ala 260	_	ys Ser Ile 65	Leu Gln Glu 270	Arg Val
Lys Lys Thr 275	Trp Thr Val	Val Asp A 280	la Lys Thr	Leu Lys Lys 285	Glu Asp
Ile Gln Lys 290	Glu Thr Val	Tyr Cys Lo	_	Asp Asp Glu 300	Thr Glu
Val Leu Lys 305	Glu Asp Ile 310		ly Phe Arg 315	Tyr Gly Ser	Asp Ile 320
Val Pro Phe	Ser Lys Val 325	Asp Glu G	lu Gln Met 330	Lys Tyr Lys	Ser Glu 335
Gly Lys Cys	Phe Ser Val	_	he Cys Lys 45	Ser Ser Gln 350	Val Gln
Arg Arg Phe 355	Phe Met Gly	Asn Gln V	al Leu Lys	Val Phe Ala 365	Ala Arg
Asp Asp Glu 370	Ala Ala Ala	Val Ala L		Leu Ile His 380	Ala Leu
Asp Asp Leu 385	Asp Met Val		al Arg Tyr 395	Ala Tyr Asp	Lys Arg 400

Ala	Asn	Pro	Gln	Val 405	Gly	Val	Ala	Phe	Pro 410	His	Ile	Lys	His	Asn 415	Tyr
Glu	Cys	Leu	Val 420	Tyr	Val	Gln	Leu	Pro 425	Phe	Met	Glu	Asp	Leu 430	Arg	Gln
Tyr	Met	Phe 435	Ser	Ser	Leu	Lys	Asn 440	Ser	Lys	Lys	Tyr	Ala 445	Pro	Thr	Glu
Ala	Gln 450	Leu	Asn	Ala	Val	Asp 455	Ala	Leu	Ile	Asp	Ser 460	Met	Ser	Leu	Ala
Lys 465	Lys	Asp	Glu	Lys	Thr 470	Asp	Thr	Leu	Glu	Asp 475	Leu	Phe	Pro	Thr	Thr 480
Lys	Ile	Pro	Asn	Pro 485	Arg	Phe	Gln	Arg	Leu 490	Phe	Gln	Cys	Leu	Leu 495	His
Arg	Ala	Leu	His 500	Pro	Arg	Glu	Pro	Leu 505	Pro	Pro	Ile	Gln	Gln 510	His	Ile
Trp	Asn	Met 515	Leu	Asn	Pro	Pro	Ala 520	Glu	Val	Thr	Thr	Lys 525	Ser	Gln	Ile
Pro	Leu 530	Ser	Lys	Ile	Lys	Thr 535	Leu	Phe	Pro	Leu	Ile 540	Glu	Ala	Lys	Lys
545	Asp				550					555					560
	Pro			565					570		_	_		575	
	Val		580					585					590		
	Pro	595					600					605			
Phe	Glu 610	Glu	Ala	Ser	Asn	Gln 615	Leu	Ile	Asn	His	11e 620	Glu	Gln	Phe	Leu

Asp Thr Asn Glu Thr Pro Tyr Phe Met Lys Ser Ile Asp Cys Ile Arg

625 630 635 640	625	630	635	640
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Ala Phe Arg Glu Glu Ala Ile Lys Phe Ser Glu Glu Gln Arg Phe Asn 650 655

Asn Phe Leu Lys Ala Leu Gln Glu Lys Val Glu Ile Lys Gln Leu Asn 660 670

His Phe Trp Glu Ile Val Val Gln Asp Gly Ile Thr Leu Ile Thr Lys 675 685

Glu Glu Ala Ser Gly Ser Ser Val Thr Ala Glu Glu Ala Lys Lys Phe 690 700

Leu Ala Pro Lys Asp Lys Pro Ser Gly Asp Thr Ala Ala Val Phe Glu 705 710 715 720

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<210> 3

<211> 645

<212> PRT

<213> Neurospora crassa

<400> 3

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Thr Gly Asp Lys Lys Ala Asp Lys Asp Ser Ala Leu Thr Ala Ala Leu 50 55 60

Thr Cys Ala Tyr Gln Ile Met Gln Gln Arg Ile Ile Ser Gln Pro Lys 65 70 75 80

Asp Met Met Gly Val Leu Leu Phe Gly Thr Glu Lys Ser Lys Phe Arg 85 90 95

Asp .	Asp	Ser	Gly 100	Asn	Gly	Thr	Gly	Tyr 105	Pro	His	Cys	Tyr	Leu 110	Leu	Ser
Asp (Leu	Asp 115	Ile	Pro	Gly	Ala	Glu 120	Asp	Val	Lys	Lys	Leu 125	Lys	Ala	Leu
Ile	Glu 130	Asp	Gly	Asp	Asp	Glu 135	Asp	Glu	Ile	Met	Val 140	Pro	Ser	Lys	Glu
Pro 145	Val	Ile	Met	Ser	Asn 150	Met	Leu	Phe	Cys	Ala 155	Asn	Gln	Val	Phe	Thr 160
Thr .	Asn	Ala	Ala	Asn 165	Phe	Gly	Ser	Arg	Arg 170	Leu	Phe	Ile	Val	Thr 175	Asp
Asn .	Asp	Asp	Pro 180	His	Ala	Gly	Asp	Lys 185	Gln	Ala	Lys	Ser	Ser 190	Ala	Ala
Val .	Arg	Ala 195	Lys	Asp	Leu	Tyr	Asp 200	Leu	Gly	Val	Val	Ile 205	Glu	Leu	Phe
Pro	Ile 210	Ser	Arg	Glu	Asp	Lys 215	Lys	Phe	Asp	Leu	Ser 220	Lys	Phe	Tyr	Asp
Asp 225	Ile	Ile	Tyr	Arg	Asn 230	Pro	Ala	Ala	Glu	Ala 235	Gly	Gln	Ser	Glu	Ser 240
Pro	Lys	Thr	Ser	Lys 245	Ser	Gly	Asp	Gly	Leu 250	Thr	Leu	Leu	Asn	Ser 255	Leu
Ile	Ser	Asn	Ile 260	Asn	Ser	Lys	Gln	Thr 265	Pro	Lys	Arg	Ser	Tyr 270	Phe	Ser
Asn	Leu	Pro 275	Phe	Glu	Leu	Ala	Pro 280	Gly	Leu	Thr	Ile	Ser 285	Ile	Lys	Gly
Tyr	Met 290	Pro	Leu	Asn	Arg	Gln 295	Thr	Pro	Thr	Arg	Ser 300	Cys	Tyr	Val	Tyr
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Asp	Phe	Ala	Ala	Arg 325	Thr	Val	Glu	Lys	Ser 330	Glu	Leu	Arg	Lys	Gly 335	Tyr
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Arg	Ser 370	Lys	Ile	Pro	Ser	Trp 375	Ala	Ser	Val	Lys	Lys 380	Ser	Ile	Phe	Ile
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		435					440					445		Ala	
	450					455					460			Val	
465					470					475				Gln	480
				485					490					Asp 495 Leu	
	_		500					505					510	Val	
	_	515					520		_			525		Leu	
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Asn Ser Asn Ala Asp Leu Lys Lys Ala Phe Glu Gln Gly Thr Leu Gly 595 600

Lys Met Thr Val Ala Glu Leu Lys Asp Ile Met Ala Ser Lys Gly Ile 610 620

Ser Thr Ala Gly Arg Lys Ala Glu Leu Val Glu Arg Leu Glu Gln Trp 625 630 630 635 635

Val Glu Glu Asn Leu 645

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